



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,646	04/27/2001	Hiroshi Dempo	Q64315	7652
7590	11/10/2004		EXAMINER	
SUGHRUE, MION, ZINN, MACPEAK & SEAS 2100 Pennsylvania Avenue, N.W. Washington, DC 20037			IYER, RAMAKRISHNA R	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/842,646	DEMPO, HIROSHI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Raju Iyer	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE **2** MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

- 1) Responsive to communication(s) filed on 27 April 2001.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

- 4) Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 1, and 7-14 is/are allowed.
- 6) Claim(s) \_\_\_\_\_ is/are rejected.
- 7) Claim(s) 2-6 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 April 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) All    b) Some \* c) None of:
      1. Certified copies of the priority documents have been received.
      2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/10/2006 &amp; 04/27/2001</u> | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

1. This application is in condition for allowance except for the following formal matters:

### ***Specification***

- a) The abstract of the disclosure is objected to because of minor errors. For example, the first sentence is written as a phrase and needs to be modified. In the last sentence, the words "is assembled" appear to be redundant. Correction is required. See MPEP § 608.01(b).
- b) 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms, which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, or inexact terms used in the specification are:
  - a) The term "invention is preferred" has been used incorrectly a number of times on pages 5 & 6, and does not provide clarity on what is meant. It should be corrected to make the meaning of the sentences clear.
  - b) Page 7, line 30 needs to be revised.
  - c) In the summary of the invention (pages 3-5), the present structure of the sentences is difficult to understand; these should preferably be re-written using smaller sentences.

d) Figure 2 shows the input packet (original IP packet) as a variable size, but in Figures 1 and 3 these are shown as fixed packets. Text should be added in the specification to explain this.

***Claims***

- a) Claim 2 recites the limitation "said header division" in line 2. There is insufficient antecedent basis for this limitation in the claim.
- b) Claims 3 - 5 recite the limitation "fragmentation processing apparatus". There is insufficient antecedent basis for this limitation in the claim.
- c) Claim 6 recites the limitation "N' pieces of fixed packet" in line 2. There is insufficient antecedent basis for this limitation in the claim.

2. Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

***Allowable Subject Matter***

- 3. Claims 1 –14 are allowed.
- 4. The following is an examiner's statement of reasons for allowance:
  - US Patent No. 6,212,190 ("Mulligan"), discloses a method and mechanism for processing an incoming packet by comparing its size with the MTU value and, if the size of the packet is larger than the MTU value, dividing it into smaller packets with independent headers such that the new packets are smaller than the MTU value. In his method, Mulligan also teaches the use of the header

information in the original packet for creating headers for each of the fragmented packets (Col. 9, line 38 to Col. 10, line 14). The prior art fails to teach or make obvious, a fragmentation processing device interfacing directly to incoming fixed packets and comprising, (a) a fragmentation processing determination means for acquiring from the fixed packets, information on a size of the IP packets, (b) an IP header processing means for extracting the IP packet header from the fixed packets and creating an IP packet header after the fragmentation process from the IP packet header, and (c) an IP packet assembling means for creating a plurality of IP packets of smaller size than the MTU size (if fragmentation process has to be executed) or assembling IP packets from the fixed packets without fragmentation (if fragmentation process does not have to be executed).

- US Patent No. 6,711,176 ("Pezeshki-Esfahani") discloses a method and apparatus for interworking ATM cell-based packets of variable lengths (with a single header across multiple cells) with ATM fixed-cell packets with independent headers. The prior art fails to teach or make obvious a fragmentation processing device interfacing directly to incoming fixed packets and comprising, (a) a fragmentation processing determination means for acquiring from the fixed packets, information on a size of the IP packets, (b) an IP header processing means for extracting the IP packet header from the fixed packets and creating an IP packet header after the fragmentation process from the IP packet header, and (c) an IP packet assembling means for creating a plurality of IP packets of smaller size than the MTU size (if fragmentation process has to be executed) or

assembling IP packets from the fixed packets without fragmentation (if fragmentation process does not have to be executed).

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (see attached list).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raju Iyer whose telephone number is (571) 272 6047. The examiner can normally be reached on 7.30 a.m. - 4.00 p.m. on all weekdays except every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on (571) 272 3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Application/Control Number: 09/842,646  
Art Unit: 2663

Page 6

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*RI*  
Raju Iyer

*Anne T. Nguyen*

CHAU NGUYEN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600